

# **Large aperture transmission window**

## **Background**

NASA desires to procure a large aperture transmission window to be used in a mobile laser remote sensing experiment. The window will permit a 0.6m aperture telescope to observe the sky. The window may be subject to various weather conditions such as rain and falling debris.

## **Physical Specifications**

Diameter: 26.25"

Clear Aperture : 25" minimum

Thickness: sufficient to meet the optical transmission requirements

Central hole: 6"

Corning 7980 fused silica or equivalent

Grade "A" bubble class 1 or equivalent

## **Optical Transmission requirements**

The distortion of a transmitted plane parallel beam shall be no more than  $\pm 25$  microradians from purely parallel.

## **Optical Coating**

As options please quote for coating either one or both sides with an anti-reflection coating with the following specs:

$R_{\max} < 0.7\%$ ,  $R_{\text{avg}} < 0.3\%$  from 350 – 550 nm AOI 0 degrees

## **Testing**

The manufacturer should verify that the transmission properties of the window meet the design requirements and provide documentation of this fact. The window may be tested in a vertical (as opposed to horizontal) configuration if necessary.

## **Mounting**

For reference a candidate mount is shown: window to be supported continuously around the edge with an O-ring centered at 0.25" inset from the outer circumference of the window.

Ø7.000  
MAX DIA FOR  
SECOND WINDOW  
MOUNTING

Ø26.250 MAIN WINDOW

ADAPTER PLATE

